

# Statement of Basis of the Federal Operating Permit

Phelps Dodge Refining Corporation

Site Name: El Paso Refinery and Rod Mill

Physical Location: 897 Hawkins Blvd

Nearest City: El Paso

County: El Paso

Permit Number: O1602

Project Type: Renewal

Standard Industrial Classification (SIC) Code: 3331

SIC Name: Primary Smelting and Refining of Copper

This Statement of Basis sets forth the legal and factual basis for the draft permit conditions in accordance with 30 TAC §122.201(a)(4). Per 30 TAC §§ 122.241 and 243, the permit holder has submitted an application under § 122.134 for permit renewal. This document may include the following information:

- A description of the facility/area process description;
- A basis for applying permit shields;
- A list of the federal regulatory applicability determinations;
- A table listing the determination of applicable requirements;
- A list of the New Source Review Requirements;
- The rationale for periodic monitoring methods selected;
- The rationale for compliance assurance methods selected;
- A compliance status; and
- A list of available unit attribute forms.

Prepared on: July 28, 2017

# **Operating Permit Basis of Determination**

## **Permit Area Process Description**

### **Overview**

Phelps Dodge El Paso Operations (Phelps Dodge) is comprised of Phelps Dodge El Paso Refinery and Rod Mill. El Paso Refinery is an electrolytic copper refinery. Impure copper anodes are dissolved electrolytically in a sulfuric acid solution (approximately 17% H<sub>2</sub>SO<sub>4</sub>). Copper migrates through the solution and deposits at the cathodes. El Paso Rod Mill is mainly a continuous cast rolling mill that casts copper rod from cathode.

### **El Paso Refinery**

#### **Tankhouse**

Copper anodes (approximately 99.6% copper) are suspended vertically in an aqueous solution of sulfuric acid in the Tankhouse electrolytic refining cells. With applied electrical voltage and current, copper in the anode is oxidized, goes into solution, and is subsequently reduced and deposited from solution at the cathode. The electrolyte is maintained at a temperature of about 150 °F and reagents such as animal hide glue, thiourea, and avitone are added to help control the physical characteristics of the copper deposited at the cathode. Finished cathodes (approximately 99.99% copper) are washed to remove electrolyte, stacked onto industrial cars, weighed, and transferred to other areas for final distribution to shearing, packaging and shipping, or to the El Paso Rod Mill for shape and rod casting. Shearing is done on market demand.

Insoluble anode impurities, called “slimes”, are collected in the bottom of the electrolytic cells during electrorefining. Slimes contain valuable metals such as copper, gold, silver, platinum, palladium, and tellurium. Slimes are flushed from the cells whenever anode scrap is removed, and delivered to the Special Metals Plant for processing. Waters from the cathode and anode washers in the Tankhouse are recycled within the Refinery and not discharged as wastewater.

#### **Special Metals Plant**

Slimes are leached in an autoclave with sulfuric acid, oxygen and steam to remove copper and tellurium. The filtered solution is passed through a bed of copper chips to remove the dissolved tellurium as a precipitate of copper telluride, which is barreled for market after dewatering. The remaining copper-bearing, tellurium-free electrolyte solution is returned to the Tankhouse. Currently, filtered solids are packaged for outside sale.

#### **Nickel Carbonate Plant**

In order to maintain the purity of electrorefined cathode, levels of impurities in the electrolyte must be controlled. This is done in a four-step process.

1. Copper is removed from the electrolyte by electrowinning in liberator cells,
2. Sulfuric acid is recovered using an Acid Purification Unit (APU®),
3. Purification of nickel carbonate solution, and
4. Precipitation of nickel carbonate.

In the first step, electrolyte is withdrawn from the electrorefining tanks in the Tankhouse. Dissolved copper is removed in Nickel Carbonate Plant (NCP) electrolytic cells using an inert anode and a copper cathode. The copper cathodes can be sold or recycled, and the copper-free solution is processed through the APU® and/or returned to the Tankhouse. The process employs weak base ion exchange resins that have the ability to absorb acids, while largely excluding metallic sulfates. The recovered sulfuric acid is used as make-up acid for the electrolyte in the Tankhouse.

The low sulfuric acid solution from the APU® process is treated with soda ash (sodium carbonate). Salts of arsenic, antimony, bismuth, copper, and zinc are removed by filtration resulting in a filter cake that can be recycled to the smelter. Nickel carbonate will mostly remain in solution.

In the final step, the pH is raised again using soda ash, causing precipitation of the nickel carbonate. The nickel carbonate is separated and recovered from the solution by filtration.

### **Cogeneration Plant**

About two-thirds of the electric power for the El Paso Operations is purchased from El Paso Electric Company. The Cogeneration Plant using natural gas fired gas turbine generator sets generates the remaining one-third. Large quantities of steam are required to heat the Tankhouse electrolyte and for various processes including the special metals and nickel carbonate plants. Steam is produced as a by-product of cogeneration. Boiler feed water is produced by removing carbonate hardness from raw well water in a Reverse Osmosis System softener. Charcoal filters remove organics and the well water then undergoes polishing in a Zeolite Resin Bed and de-aeration before being fed to the boilers.

To control NOx emissions to the atmosphere, well water that has been treated by reverse osmosis and deionization is injected into three turbines operating in the Cogeneration Plant.

### **Anode Casting**

Two shaft furnaces are used to melt anode scrap from the Tankhouse, reject copper, and blister copper for the production of anodes. Copper is poured from the holding furnace, which is used to regulate the flow of copper as its melts, into a casting ladle. Copper is poured into anode molds mounted on the perimeter of the casting wheel. A slurry of barium sulfate is used as a mold parting agent. Cooling water is sprayed onto the cast anodes, which are then hydraulically lifted from the mold and transferred to bosch tank for further water cooling. Inspected anodes are placed in anode cars for transfer to the Receiving Department for weighing and routing to the Tankhouse.

### **El Paso Rod Mill**

The main commercial activity at this location is the rolling of copper rod. Raw material in the form of copper cathodes is melted in a vertical shaft furnace. The molten copper flows to a holding furnace where it is poured into a continuous caster and cast into a bar shape. The bar is mechanically rolled in a rolling mill where it is worked into a 5/16-in. diameter rod. The rod exits the rolling mill and is cleaned in a sulfuric acid-hydrogen peroxide bath. The cleaning solution, which adheres to the rod surface, is rinsed off in a series of three rinse circuits. As a final treatment, the cleaned rod is dipped in an antioxidant wax solution. Final product is a 7,400 pound package of coiled rod.

### **FOPs at Site**

The “application area” consists of the emission units and that portion of the site included in the application and this permit. Multiple FOPs may be issued to a site in accordance with 30 TAC § 122.201(e). When there is only one area for the site, then the application information and permit will include all units at the site. Additional FOPs that exist at the site, if any, are listed below.

Additional FOPs: None

### **Major Source Pollutants**

The table below specifies the pollutants for which the site is a major source:

Major Pollutants	NOX, CO
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### **Reading State of Texas’s Federal Operating Permit**

The Title V Federal Operating Permit (FOP) lists all state and federal air emission regulations and New Source Review (NSR) authorizations (collectively known as “applicable requirements”) that apply at a particular site or permit area (in the event a site has multiple FOPs). **The FOP does not authorize new emissions or new construction activities.** The FOP begins with an introductory page which is common to all Title V permits. This page gives the details of the company, states the authority of the issuing agency, requires the company to operate in accordance with this permit and 30 Texas

Administrative Code (TAC) Chapter 122, requires adherence with NSR requirements of 30 TAC Chapter 116, and finally indicates the permit number and the issuance date.

This is followed by the table of contents, which is generally composed of the following elements. Not all permits will have all of the elements.

- General Terms and Conditions
- Special Terms and Conditions
  - Emissions Limitations and Standards, Monitoring and Testing, and Recordkeeping and Reporting
  - Additional Monitoring Requirements
  - New Source Review Authorization Requirements
  - Compliance Requirements
  - Protection of Stratosphere Ozone
  - Permit Location
  - Permit Shield (30 TAC § 122.148)
- Attachments
  - Applicable Requirements Summary
    - Unit Summary
    - Applicable Requirements Summary
  - Additional Monitoring Requirements
  - Permit Shield
  - New Source Review Authorization References
  - Compliance Plan
  - Alternative Requirements
- Appendix A
  - Acronym list

#### General Terms and Conditions

The General Terms and Conditions are the same and appear in all permits. The first paragraph lists the specific citations for 30 TAC Chapter 122 requirements that apply to all Title V permit holders. The second paragraph describes the requirements for record retention. The third paragraph provides details for voiding the permit, if applicable. The fourth paragraph states that the permit holder shall comply with the requirements of 30 TAC Chapter 116 by obtaining a New Source Review authorization prior to new construction or modification of emission units located in the area covered by this permit. The fifth paragraph provides details on submission of reports required by the permit.

#### Special Terms and Conditions

Emissions Limitations and Standards, Monitoring and Testing, and Recordkeeping and Reporting. The TCEQ has designated certain applicable requirements as site-wide requirements. A site-wide requirement is a requirement that applies uniformly to all the units or activities at the site. Units with only site-wide requirements are addressed on Form OP-REQ1 and are not required to be listed separately on a OP-UA Form or Form OP-SUM. Form OP-SUM must list all units addressed in the application and provide identifying information, applicable OP-UA Forms, and preconstruction authorizations. The various OP-UA Forms provide the characteristics of each unit from which applicable requirements are established. Some exceptions exist as a few units may have both site-wide requirements and unit specific requirements.

Other conditions. The other entries under special terms and conditions are in general terms referring to compliance with the more detailed data listed in the attachments.

#### Attachments

Applicable Requirements Summary. The first attachment, the Applicable Requirements Summary, has two tables, addressing unit specific requirements. The first table, the Unit Summary, includes a list of units with applicable requirements, the unit type, the applicable regulation, and the requirement driver. The intent of the requirement driver is to inform the reader that a given unit may have several different operating scenarios and the differences between those operating scenarios.

The applicable requirements summary table provides the detailed citations of the rules that apply to the various units. For each unit and operating scenario, there is an added modifier called the "index number," detailed citations specifying monitoring and testing requirements, recordkeeping requirements, and reporting requirements. The data for this table are based on data supplied by the applicant on the OP-SUM and various OP-UA forms.

**Additional Monitoring Requirement.** The next attachment includes additional monitoring the applicant must perform to ensure compliance with the applicable standard. Compliance assurance monitoring (CAM) is often required to provide a reasonable assurance of compliance with applicable emission limitations/standards for large emission units that use control devices to achieve compliance with applicant requirements. When necessary, periodic monitoring (PM) requirements are specified for certain parameters (i.e. feed rates, flow rates, temperature, fuel type and consumption, etc.) to determine if a term and condition or emission unit is operating within specified limits to control emissions. These additional monitoring approaches may be required for two reasons. First, the applicable rules do not adequately specify monitoring requirements (exception- Maximum Achievable Control Technology Standards (MACTs) generally have sufficient monitoring), and second, monitoring may be required to fill gaps in the monitoring requirements of certain applicable requirements. In situations where the NSR permit is the applicable requirement requiring extra monitoring for a specific emission unit, the preferred solution is to have the monitoring requirements in the NSR permit updated so that all NSR requirements are consolidated in the NSR permit.

**Permit Shield.** A permit may or may not have a permit shield, depending on whether an applicant has applied for, and justified the granting of, a permit shield. A permit shield is a special condition included in the permit document stating that compliance with the conditions of the permit shall be deemed compliance with the specified potentially applicable requirement(s) or specified applicable state-only requirement(s).

**New Source Review Authorization References.** All activities which are related to emissions in the state of Texas must have a NSR authorization prior to beginning construction. This section lists all units in the permit and the NSR authorization that allowed the unit to be constructed or modified. Units that do not have unit specific applicable requirements other than the NSR authorization do not need to be listed in this attachment. While NSR permits are not physically a part of the Title V permit, they are legally incorporated into the Title V permit by reference. Those NSR permits whose emissions exceed certain PSD/NA thresholds must also undergo a Federal review of federally regulated pollutants in addition to review for state regulated pollutants.

**Compliance Plan.** A permit may have a compliance schedule attachment for listing corrective actions plans for any emission unit that is out of compliance with an applicable requirement.

**Alternative Requirements.** This attachment will list any alternative monitoring plans or alternative means of compliance for applicable requirements that have been approved by the EPA Administrator and/or the TCEQ Executive Director.

Appendix A

Acronym list. This attachment lists the common acronyms used when discussing the FOPs.

### **Stationary vents subject to 30 TAC Chapter 111, Subchapter A, § 111.111(a)(1)(B) addressed in the Special Terms and Conditions**

The site contains stationary vents with a flowrate less than 100,000 actual cubic feet per minute (acfm) and constructed either before or after January 31, 1972 which are limited, over a six-minute average, to 20% opacity as required by 30 TAC § 111.111(a)(1)(B). As a site may have a large number of stationary vents that fall into this category, they are not required to be listed individually in the permit's Applicable Requirement Summary. This is consistent with EPA's White Paper for Streamlined Development of Part 70 Permit Applications, July 10, 1995, that states that requirements that apply identically to emission units at a site can be treated on a generic basis such as source-wide opacity limits.

Periodic monitoring is specified in Special Term and Condition 3.A for stationary vents subject to 30 TAC § 111.111(a)(1)(B) to verify compliance with the 20% opacity limit. These vents are not expected to produce visible emissions during normal operation. The TCEQ evaluated the probability of these sources violating the opacity standards and determined that there is a very low potential that an opacity standard would be exceeded. It was determined that continuous monitoring for these sources is not warranted as there would be very limited environmental benefit in

continuously monitoring sources that have a low potential to produce visible emissions. Therefore, the TCEQ set the visible observation monitoring frequency for these sources to once per calendar quarter.

The TCEQ has exempted vents that are not capable of producing visible emissions from periodic monitoring requirements. These vents include sources of colorless VOCs, non-fuming liquids, and other materials that cannot produce emissions that obstruct the transmission of light. Passive ventilation vents, such as plumbing vents, are also included in this category. Since this category of vents are not capable of producing opacity due to the physical or chemical characteristics of the emission source, periodic monitoring is not required as it would not yield any additional data to assure compliance with the 20% opacity standard of 30 TAC § 111.111(a)(1)(B).

In the event that visible emissions are detected, either through the quarterly observation or other credible evidence, such as observations from company personnel, the permit holder shall either report a deviation or perform a Test Method 9 observation to determine the opacity consistent with the 6-minute averaging time specified in 30 TAC § 111.111(a)(1)(B). An additional provision is included to monitor combustion sources more frequently than quarterly if alternate fuels are burned for periods greater than 24 consecutive hours. This will address possible emissions that may arise when switching fuel types.

### **Federal Regulatory Applicability Determinations**

The following chart summarizes the applicability of the principal air pollution regulatory programs to the permit area:

<b>Regulatory Program</b>	<b>Applicability (Yes/No)</b>
Prevention of Significant Deterioration (PSD)	No
Nonattainment New Source Review (NNSR)	No
Minor NSR	Yes
40 CFR Part 60 - New Source Performance Standards	Yes
40 CFR Part 61 - National Emission Standards for Hazardous Air Pollutants (NESHAPs)	No
40 CFR Part 63 - NESHAPs for Source Categories	Yes
Title IV (Acid Rain) of the Clean Air Act (CAA)	No
Title V (Federal Operating Permits) of the CAA	Yes
Title VI (Stratospheric Ozone Protection) of the CAA	Yes
CSAPR (Cross-State Air Pollution Rule)	No

### **Basis for Applying Permit Shields**

An operating permit applicant has the opportunity to specifically request a permit shield to document that specific applicable requirements do not apply to emission units in the permit. A permit shield is a special condition stating that compliance with the conditions of the permit shall be deemed compliance with the specified potentially applicable requirements or specified potentially applicable state-only requirements. A permit shield has been requested in the

application for specific emission units. For the permit shield requests that have been approved, the basis of determination for regulations that the owner/operator need not comply with are located in the "Permit Shield" attachment of the permit.

### **Insignificant Activities**

In general, units not meeting the criteria for inclusion on either Form OP-SUM or Form OP-REQ1 are not required to be addressed in the operating permit application. Examples of these types of units include, but are not limited to, the following:

1. Office activities such as photocopying, blueprint copying, and photographic processes.
2. Sanitary sewage collection and treatment facilities other than those used to incinerate wastewater treatment plant sludge. Stacks or vents for sanitary sewer plumbing traps are also included.
3. Food preparation facilities including, but not limited to, restaurants and cafeterias used for preparing food or beverages primarily for consumption on the premises.
4. Outdoor barbecue pits, campfires, and fireplaces.
5. Laundry dryers, extractors, and tumblers processing bedding, clothing, or other fabric items generated primarily at the premises. This does not include emissions from dry cleaning systems using perchloroethylene or petroleum solvents.
6. Facilities storing only dry, sweet natural gas, including natural gas pressure regulator vents.
7. Any air separation or other industrial gas production, storage, or packaging facility. Industrial gases, for purposes of this list, include only oxygen, nitrogen, helium, neon, argon, krypton, and xenon.
8. Storage and handling of sealed portable containers, cylinders, or sealed drums.
9. Vehicle exhaust from maintenance or repair shops.
10. Storage and use of non-VOC products or equipment for maintaining motor vehicles operated at the site (including but not limited to, antifreeze and fuel additives).
11. Air contaminant detectors and recorders, combustion controllers and shut-off devices, product analyzers, laboratory analyzers, continuous emissions monitors, other analyzers and monitors, and emissions associated with sampling activities. Exception to this category includes sampling activities that are deemed fugitive emissions and under a regulatory leak detection and repair program.
12. Bench scale laboratory equipment and laboratory equipment used exclusively for chemical and physical analysis, including but not limited to, assorted vacuum producing devices and laboratory fume hoods.
13. Steam vents, steam leaks, and steam safety relief valves, provided the steam (or boiler feedwater) has not contacted other materials or fluids containing regulated air pollutants other than boiler water treatment chemicals.
14. Storage of water that has not contacted other materials or fluids containing regulated air pollutants other than boiler water treatment chemicals.
15. Well cellars.
16. Fire or emergency response equipment and training, including but not limited to, use of fire control equipment including equipment testing and training, and open burning of materials or fuels associated with firefighting training.
17. Crucible or pot furnaces with a brim full capacity of less than 450 cubic inches of any molten metal.
18. Equipment used exclusively for the melting or application of wax.
19. All closed tumblers used for the cleaning or deburring of metal products without abrasive blasting, and all open tumblers with a batch capacity of 1,000 lbs. or less.
20. Shell core and shell mold manufacturing machines.
21. Sand or investment molds with a capacity of 100 lbs. or less used for the casting of metals;
22. Equipment used for inspection of metal products.
23. Equipment used exclusively for rolling, forging, pressing, drawing, spinning, or extruding either hot or cold metals by some mechanical means.
24. Instrument systems utilizing air, natural gas, nitrogen, oxygen, carbon dioxide, helium, neon, argon, krypton, and xenon.
25. Battery recharging areas.
26. Brazing, soldering, or welding equipment.

### **Determination of Applicable Requirements**

The tables below include the applicability determinations for the emission units, the index number(s) where applicable, and all relevant unit attribute information used to form the basis of the applicability determination. The unit attribute

information is a description of the physical properties of an emission unit which is used to determine the requirements to which the permit holder must comply. For more information about the descriptions of the unit attributes specific Unit Attribute Forms may be viewed at [www.tceq.texas.gov/permitting/air/nav/air\\_all\\_ua\\_forms.html](http://www.tceq.texas.gov/permitting/air/nav/air_all_ua_forms.html).

A list of unit attribute forms is included at the end of this document. Some examples of unit attributes include construction date; product stored in a tank; boiler fuel type; etc.. Generally, multiple attributes are needed to determine the requirements for a given emission unit and index number. The table below lists these attributes in the column entitled "Basis of Determination." Attributes that demonstrate that an applicable requirement applies will be the factual basis for the specific citations in an applicable requirement that apply to a unit for that index number. The TCEQ Air Permits Division has developed flowcharts for determining applicability of state and federal regulations based on the unit attribute information in a Decision Support System (DSS). These flowcharts can be accessed via the internet at [www.tceq.texas.gov/permitting/air/nav/air\\_supportsys.html](http://www.tceq.texas.gov/permitting/air/nav/air_supportsys.html). The Air Permits Division staff may also be contacted for assistance at (512) 239-1250.

The attributes for each unit and corresponding index number provide the basis for determining the specific legal citations in an applicable requirement that apply, including emission limitations or standards, monitoring, recordkeeping, and reporting. The rules were found to apply or not apply by using the unit attributes as answers to decision questions found in the flowcharts of the DSS. Some additional attributes indicate which legal citations of a rule apply. The legal citations that apply to each emission unit may be found in the Applicable Requirements Summary table of the draft permit. There may be some entries or rows of units and rules not found in the permit, or if the permit contains a permit shield, repeated in the permit shield area. These are sets of attributes that describe negative applicability, or; in other words, the reason why a potentially applicable requirement does not apply.

If applicability determinations have been made which differ from the available flowcharts, an explanation of the decisions involved in the applicability determination is specified in the column "Changes and Exceptions to RRT." If there were no exceptions to the DSS, then this column has been removed.

The draft permit includes all emission limitations or standards, monitoring, recordkeeping and reporting required by each applicable requirement. If an applicable requirement does not require monitoring, recordkeeping, or reporting, the word "None" will appear in the Applicable Requirements Summary table. If additional periodic monitoring is required for an applicable requirement, it will be explained in detail in the portion of this document entitled "Rationale for Compliance Assurance Monitoring (CAM)/ Periodic Monitoring Methods Selected."

When attributes demonstrate that a unit is not subject to an applicable requirement, the applicant may request a permit shield for those items. The portion of this document entitled "Basis for Applying Permit Shields" specifies which units, if any, have a permit shield.

#### Operational Flexibility

When an emission unit has multiple operating scenarios, it will have a different index number associated with each operating condition. This means that units are permitted to operate under multiple operating conditions. The applicable requirements for each operating condition are determined by a unique set of unit attributes. For example, a tank may store two different products at different points in time. The tank may, therefore, need to comply with two distinct sets of requirements, depending on the product that is stored. Both sets of requirements are included in the permit, so that the permit holder may store either product in the tank.



### Determination of Applicable Requirements

Unit ID	Regulation	Index Number	Basis of Determination*
EP-49	40 CFR Part 60, Subpart IIII	60IIII-TEG	Applicability Date = Stationary CI ICE commenced construction, reconstruction, or modification on or before 07/11/2005.
EP-49	40 CFR Part 63, Subpart ZZZZ	63ZZZZ-TEG	<p>HAP Source = Any stationary source of hazardous air pollutants that is not a major source as defined in 40 CFR § 63.2.</p> <p>Brake HP = Stationary RICE with a brake HP greater than or equal to 250 HP and less than 300 HP.</p> <p>Construction/Reconstruction Date = Commenced construction or reconstruction before December 19, 2002.</p> <p>Nonindustrial Emergency Engine = Stationary RICE is not defined in 40 CFR §63.6675 as a residential emergency RICE, a commercial emergency RICE, or an institutional emergency RICE.</p> <p>Service Type = Normal use.</p> <p>Stationary RICE Type = Compression ignition engine</p>
EP-50	40 CFR Part 60, Subpart IIII	60IIII-EWTG	Applicability Date = Stationary CI ICE commenced construction, reconstruction, or modification on or before 07/11/2005.
EP-50	40 CFR Part 63, Subpart ZZZZ	63ZZZZ-EWTG	<p>HAP Source = Any stationary source of hazardous air pollutants that is not a major source as defined in 40 CFR § 63.2.</p> <p>Brake HP = Stationary RICE with a brake HP greater than or equal to 100 HP and less than 250 HP.</p> <p>Construction/Reconstruction Date = Commenced construction or reconstruction before December 19, 2002.</p> <p>Nonindustrial Emergency Engine = Stationary RICE is not defined in 40 CFR §63.6675 as a residential emergency RICE, a commercial emergency RICE, or an institutional emergency RICE.</p> <p>Service Type = Normal use.</p> <p>Stationary RICE Type = Compression ignition engine</p>
EP-52	40 CFR Part 60, Subpart IIII	60IIII-FPEG	<p>Applicability Date = Stationary CI ICE commenced construction, reconstruction, or modification after 07/11/2005.</p> <p>Diesel = Diesel fuel is used.</p> <p>Kilowatts = Power rating is greater than 368 KW and less than 450 KW.</p> <p>Exemptions = The CI ICE is not exempt due to national security, testing at an engine test cell/stand or as a temporary replacement.</p> <p>Displacement = Displacement is greater than or equal to 10 and less than 15 liters per cylinder.</p> <p>Service = CI ICE is a fire-pump engine, an emergency engine certified to National Fire Protection Association requirements.</p> <p>Standards = The emergency CI ICE meets the standards applicable to non-emergency engines.</p> <p>Commencing = CI ICE was newly constructed after 07/11/2005.</p> <p>Compliance Option = Records are being kept of manufacturer data according to §60.4211(b)(3).</p> <p>Manufacture Date = Date of manufacture was after 07/01/2006.</p> <p>Model Year = CI ICE was manufactured in model year 2007.</p>
EP-52	40 CFR Part 63, Subpart ZZZZ	63ZZZZ-FPEG	<p>HAP Source = Any stationary source of hazardous air pollutants that is not a major source as defined in 40 CFR § 63.2.</p> <p>Brake HP = Stationary RICE with a brake HP greater than 500 HP.</p> <p>Construction/Reconstruction Date = Commenced construction or reconstruction on or after June 12, 2006.</p>

Unit ID	Regulation	Index Number	Basis of Determination*
EP-EG-6	40 CFR Part 60, Subpart IIII	60IIII-W10EG	Applicability Date = Stationary CI ICE commenced construction, reconstruction, or modification on or before 07/11/2005.
EP-EG-6	40 CFR Part 63, Subpart ZZZZ	63ZZZZ-W10EG	<p>HAP Source = Any stationary source of hazardous air pollutants that is not a major source as defined in 40 CFR § 63.2.</p> <p>Brake HP = Stationary RICE with a brake HP greater than or equal to 250 HP and less than 300 HP.</p> <p>Construction/Reconstruction Date = Commenced construction or reconstruction before December 19, 2002.</p> <p>Nonindustrial Emergency Engine = Stationary RICE is not defined in 40 CFR §63.6675 as a residential emergency RICE, a commercial emergency RICE, or an institutional emergency RICE.</p> <p>Service Type = Normal use.</p> <p>Stationary RICE Type = Compression ignition engine</p>
EP-EG-7	40 CFR Part 60, Subpart JJJJ	60JJJJ-NGFEG	<p>Construction/Reconstruction/Modification Date = The stationary spark ignition (SI) internal combustion engine (ICE) commenced construction, reconstruction or modification after June 12, 2006.</p> <p>Manufactured Date = Date of manufacture is on or after January 1, 2009.</p> <p>Test Cell = The SI ICE is not being tested at an engine test cell/stand.</p> <p>Certified = Purchased a certified SI ICE.</p> <p>National Security = The SI ICE is not eligible for exemption due to national security.</p> <p>Operation = Operating and maintaining the certified SI ICE and control device according to manufacturer's written instructions.</p> <p>Temp Replacement = The SI ICE is not acting as a temporary replacement.</p> <p>Horsepower = Maximum engine power greater than 25 HP and less than or equal to 100 HP.</p> <p>Fuel = SI ICE that uses natural gas.</p> <p>Service = SI ICE is an emergency engine.</p> <p>Lean Burn = The SI ICE is a rich-burn engine.</p> <p>Commencing = SI ICE that is commencing new construction.</p>
EP-EG-7	40 CFR Part 63, Subpart ZZZZ	63ZZZZ-NGFEG	<p>HAP Source = Any stationary source of hazardous air pollutants that is not a major source as defined in 40 CFR § 63.2.</p> <p>Brake HP = Stationary RICE with a brake HP less than 100 HP.</p> <p>Construction/Reconstruction Date = Commenced construction or reconstruction on or after June 12, 2006.</p>
GASTK	30 TAC Chapter 115, Storage of VOCs	R5112-1	<p>Alternate Control Requirement = Not using an alternate method for demonstrating and documenting continuous compliance with applicable control requirements or exemption criteria.</p> <p>Tank Description = Tank using a submerged fill pipe</p> <p>True Vapor Pressure = True vapor pressure is greater than or equal to 1.5 psia</p> <p>Product Stored = Gasoline from a storage container in motor vehicle fuel dispensing service (as defined in 30 TAC Chapter 115)</p> <p>Storage Capacity = Capacity is less than 25,000 gallons</p>
GASTK	40 CFR Part 60, Subpart Kb	60Kb-1	<p>Product Stored = Petroleum liquid (other than petroleum or condensate)</p> <p>Storage Capacity = Capacity is less than 10,600 gallons (40,000 liters)</p>

Unit ID	Regulation	Index Number	Basis of Determination*
GRPDTKS	30 TAC Chapter 115, Storage of VOCs	R5112-3	<p>Alternate Control Requirement = Not using an alternate method for demonstrating and documenting continuous compliance with applicable control requirements or exemption criteria.</p> <p>Tank Description = Tank does not require emission controls</p> <p>True Vapor Pressure = True vapor pressure is less than 1.0 psia</p> <p>Product Stored = VOC other than crude oil or condensate</p> <p>Storage Capacity = Capacity is greater than 1,000 gallons but less than or equal to 25,000 gallons</p>
GRPDTKS	40 CFR Part 60, Subpart K	60K-2	<p>Construction/Modification Date = After March 8, 1974 and on or before May 19, 1978</p> <p>Storage Capacity = Capacity is 40,000 gallons (151,416 liters) or less</p>
GRPDTKS	40 CFR Part 60, Subpart Kb	60Kb-2	Product Stored = Stored product other than volatile organic liquid or petroleum liquid
GRPUSEDOILTK	30 TAC Chapter 115, Storage of VOCs	R5112-4	<p>Alternate Control Requirement = Not using an alternate method for demonstrating and documenting continuous compliance with applicable control requirements or exemption criteria.</p> <p>Tank Description = Tank does not require emission controls</p> <p>True Vapor Pressure = True vapor pressure is less than 1.0 psia</p> <p>Product Stored = VOC other than crude oil or condensate</p> <p>Storage Capacity = Capacity is greater than 1,000 gallons but less than or equal to 25,000 gallons</p>
GRPUSEDOILTK	40 CFR Part 60, Subpart K	60K-3	<p>Construction/Modification Date = After March 8, 1974 and on or before May 19, 1978</p> <p>Storage Capacity = Capacity is 40,000 gallons (151,416 liters) or less</p> <p>Product Stored = Stored product other than petroleum liquid (as defined in 40 CFR Part 60, Subpart K)</p>
SPCC G	30 TAC Chapter 115, Storage of VOCs	R5112-3	<p>Alternate Control Requirement = Not using an alternate method for demonstrating and documenting continuous compliance with applicable control requirements or exemption criteria.</p> <p>Tank Description = Tank does not require emission controls</p> <p>True Vapor Pressure = True vapor pressure is less than 1.0 psia</p> <p>Product Stored = VOC other than crude oil or condensate</p> <p>Storage Capacity = Capacity is greater than 1,000 gallons but less than or equal to 25,000 gallons</p>
SPCC G	40 CFR Part 60, Subpart Kb	60Kb-2	Product Stored = Stored product other than volatile organic liquid or petroleum liquid
GRPDCT1	40 CFR Part 60, Subpart Dc	60Dc-5	<p>Construction/Modification Date = On or before June 9, 1989.</p> <p>Maximum Design Heat Input Capacity = Maximum design heat input capacity is greater than or equal to 10 MMBtu/hr (2.9 MW) but less than or equal to 100 MMBtu (29 MW).</p> <p>Other Subparts = The facility is not covered under 40 CFR Part 60, Subparts AAAA or KKKK, or under an approved State or Federal section 111(d)/129 plan implementing 40 CFR Part 60, Subpart BBBB.</p> <p>Heat Input Capacity = Heat input capacity is greater than 10 MMBtu/hr (2.9 MW) but less than 30 MMBtu/hr (8.7 MW).</p> <p>D-Series Fuel Type = Natural gas.</p>

Unit ID	Regulation	Index Number	Basis of Determination*
			<p>ACF Option - SO<sub>2</sub> = Other ACF or no ACF.</p> <p>ACF Option - PM = Other ACF or no ACF.</p> <p>30% Coal Duct Burner = The facility does not combust coal in a duct burner as part of a combined cycle system; or more than 30% of the heat is from combustion of coal and less than 70% is from exhaust gases entering the duct burner.</p>
GRPDCT2	40 CFR Part 60, Subpart Dc	60Dc-6	<p>Construction/Modification Date = After June 9, 1989 but on or before February 28, 2005.</p> <p>PM Monitoring Type = Method 5, 5B or 17 sampling.</p> <p>Maximum Design Heat Input Capacity = Maximum design heat input capacity is greater than or equal to 10 MMBtu/hr (2.9 MW) but less than or equal to 100 MMBtu (29 MW).</p> <p>SO<sub>2</sub> Inlet Monitoring Type = Fuel certification (or maintaining receipts).</p> <p>Other Subparts = The facility is not covered under 40 CFR Part 60, Subparts AAAA or KKKK, or under an approved State or Federal section 111(d)/129 plan implementing 40 CFR Part 60, Subpart BBBB.</p> <p>SO<sub>2</sub> Outlet Monitoring Type = Method 6B sampling.</p> <p>Heat Input Capacity = Heat input capacity is greater than 10 MMBtu/hr (2.9 MW) but less than 30 MMBtu/hr (8.7 MW).</p> <p>Technology Type = None.</p> <p>D-Series Fuel Type = Natural gas.</p> <p>47C-Option = COMS exemption § 60.47c(f) for a facility that burns only gaseous fuels or fuel oils that contain less than or equal to 0.5 weight percent sulfur and operates according to a written site-specific monitoring plan approved by the permitting authority.</p> <p>ACF Option - SO<sub>2</sub> = Other ACF or no ACF.</p> <p>ACF Option - PM = Other ACF or no ACF.</p> <p>30% Coal Duct Burner = The facility does not combust coal in a duct burner as part of a combined cycle system; or more than 30% of the heat is from combustion of coal and less than 70% is from exhaust gases entering the duct burner.</p>
RMB01	40 CFR Part 60, Subpart Dc	60Dc-4	<p>Construction/Modification Date = On or before June 9, 1989.</p> <p>Maximum Design Heat Input Capacity = Maximum design heat input capacity is less than 10 MMBtu/hr (2.9 MW).</p> <p>Other Subparts = The facility is not covered under 40 CFR Part 60, Subparts AAAA or KKKK, or under an approved State or Federal section 111(d)/129 plan implementing 40 CFR Part 60, Subpart BBBB.</p> <p>Heat Input Capacity = Heat input capacity is less than or equal to 10 MMBtu/hr (2.9 MW).</p> <p>D-Series Fuel Type = Natural gas.</p> <p>ACF Option - SO<sub>2</sub> = Other ACF or no ACF.</p> <p>ACF Option - PM = Other ACF or no ACF.</p> <p>30% Coal Duct Burner = The facility does not combust coal in a duct burner as part of a combined cycle system; or more than 30% of the heat is from combustion of coal and less than 70% is from exhaust gases entering the duct burner.</p>
GRPTUR	40 CFR Part 60, Subpart GG	60GG-1	<p>Duct Burner = The turbine is part of a combined cycle turbine system equipped with supplemental heat (duct burner).</p> <p>NO<sub>x</sub> Control Method = Water or steam injection only.</p> <p>Peak Load Heat Input = Heat Input is greater or equal to 10 MMBtu/hr (10.7 GJ/hr) and less than or equal to 100 MMBtu/hr (107.2 GJ/hr).</p> <p>Construction/Modification Date = On or after October 3, 1982 and before July 8, 2004.</p> <p>NO<sub>x</sub> Allowance = The owner or operator is not electing to use a NO<sub>x</sub> allowance in determining emission limits in 40 CFR § 60.332(a).</p>

Unit ID	Regulation	Index Number	Basis of Determination*
			<p>NOx Monitoring Method = Continuous monitoring system for water or steam injection.</p> <p>Sulfur Content = Compliance is demonstrated by determining the sulfur content of the fuel.</p> <p>Turbine Cycle = Unit recovers heat from the gas turbine exhaust to heat water or generate steam.</p> <p>Fuel Type Fired = Natural gas meeting the definition in § 60.331(u).</p> <p>Subpart GG Service Type = Electric utility generation.</p> <p>Fuel Supply = Stationary gas turbine is supplied its fuel without intermediate bulk storage.</p> <p>Fuel Monitoring Schedule = Previously approved custom fuel monitoring schedule.</p>
GT-3	40 CFR Part 60, Subpart GG	60GG-2	<p>Duct Burner = The turbine is part of a combined cycle turbine system not equipped with supplemental heat (duct burner).</p> <p>Peak Load Heat Input = Heat Input is greater or equal to 10 MMBtu/hr (10.7 GJ/hr) and less than or equal to 100 MMBtu/hr (107.2 GJ/hr).</p> <p>Construction/Modification Date = On or after October 3, 1982 and before July 8, 2004.</p> <p>NOx Allowance = The owner or operator is not electing to use a NO<sub>x</sub> allowance in determining emission limits in 40 CFR § 60.332(a).</p> <p>Sulfur Content = Compliance is demonstrated by determining the sulfur content of the fuel.</p> <p>Turbine Cycle = Unit does not recover heat from the gas turbine exhaust to preheat inlet combustion air; or to heat water or generate steam.</p> <p>Fuel Type Fired = Natural gas meeting the definition in § 60.331(u).</p> <p>Subpart GG Service Type = Emergency or firefighting.</p> <p>Fuel Supply = Stationary gas turbine is supplied its fuel without intermediate bulk storage.</p> <p>Fuel Monitoring Schedule = Previously approved custom fuel monitoring schedule.</p>
GT-3	40 CFR Part 60, Subpart GG	60GG-3	<p>Duct Burner = The turbine is part of a combined cycle turbine system not equipped with supplemental heat (duct burner).</p> <p>Peak Load Heat Input = Heat Input is greater or equal to 10 MMBtu/hr (10.7 GJ/hr) and less than or equal to 100 MMBtu/hr (107.2 GJ/hr).</p> <p>Construction/Modification Date = On or after October 3, 1982 and before July 8, 2004.</p> <p>NOx Allowance = The owner or operator is not electing to use a NO<sub>x</sub> allowance in determining emission limits in 40 CFR § 60.332(a).</p> <p>Sulfur Content = Compliance is demonstrated by determining the sulfur content of the fuel.</p> <p>Turbine Cycle = Unit does not recover heat from the gas turbine exhaust to preheat inlet combustion air; or to heat water or generate steam.</p> <p>Fuel Type Fired = Natural gas meeting the definition in § 60.331(u).</p> <p>Subpart GG Service Type = Emergency or firefighting.</p> <p>Fuel Supply = Stationary gas turbine is supplied its fuel from a bulk storage tank.</p> <p>Fuel Monitoring Schedule = Previously approved custom fuel monitoring schedule.</p>

\* - The "unit attributes" or operating conditions that determine what requirements apply

## NSR Versus Title V FOP

The state of Texas has two Air permitting programs, New Source Review (NSR) and Title V Federal Operating Permits. The two programs are substantially different both in intent and permit content.

NSR is a preconstruction permitting program authorized by the Texas Clean Air Act and Title I of the Federal Clean Air Act (FCAA). The processing of these permits is governed by 30 Texas Administrative Code (TAC) Chapter 116.111. The Title V Federal Operating Program is a federal program authorized under Title V of the FCAA that has been delegated to the state of Texas to administer and is governed by 30 TAC Chapter 122. The major differences between the two permitting programs are listed in the table below:

NSR Permit	Federal Operating Permit(FOP)
Issued Prior to new Construction or modification of an existing facility	For initial permit with application shield, can be issued after operation commences; significant revisions require approval prior to operation.
Authorizes air emissions	Codifies existing applicable requirements, does not authorize new emissions
Ensures issued permits are protective of the environment and human health by conducting a health effects review and that requirement for best available control technology (BACT) is implemented.	Applicable requirements listed in permit are used by the inspectors to ensure proper operation of the site as authorized. Ensures that adequate monitoring is in place to allow compliance determination with the FOP.
Up to two Public notices may be required. Opportunity for public comment and contested case hearings for some authorizations.	One public notice required. Opportunity for public comments. No contested case hearings.
Applies to all point source emissions in the state.	Applies to all major sources and some non-major sources identified by the EPA.
Applies to facilities: a portion of site or individual emission sources	One or multiple FOPs cover the entire site (consists of multiple facilities)
Permits include terms and conditions under which the applicant must construct and operate its various equipment and processes on a facility basis.	Permits include terms and conditions that specify the general operational requirements of the site; and also include codification of all applicable requirements for emission units at the site.
Opportunity for EPA review for Federal Prevention of Significant Deterioration (PSD) and Nonattainment (NA) permits for major sources.	Opportunity for EPA review, Affected states review, and a Public petition period for every FOP.
Permits have a table listing maximum emission limits for pollutants	Permit has an applicable requirements table and Periodic Monitoring (PM) / Compliance Assurance Monitoring (CAM) tables which document applicable monitoring requirements.
Permits can be altered or amended upon application by company. Permits must be issued before construction or modification of facilities can begin.	Permits can be revised through several revision processes, which provide for different levels of public notice and opportunity to comment. Changes that would be significant revisions require that a revised permit be issued before those changes can be operated.
NSR permits are issued independent of FOP requirements.	FOP are independent of NSR permits, but contain a list of all NSR permits incorporated by reference

## New Source Review Requirements

Below is a list of the New Source Review (NSR) permits for the permitted area. These NSR permits are incorporated by reference into the operating permit and are enforceable under it. These permits can be found in the main TCEQ file room,

located on the first floor of Building E, 12100 Park 35 Circle, Austin, Texas. The Public Education Program may be contacted at 1-800-687-4040 or the Air Permits Division (APD) may be contacted at 1-512-239-1250 for help with any question.

Additionally, the site contains emission units that are permitted by rule under the requirements of 30 TAC Chapter 106, Permits by Rule. The following table specifies the permits by rule that apply to the site. All current permits by rule are contained in Chapter 106. Outdated 30 TAC Chapter 106 permits by rule may be viewed at the following Web site:

[www.tceq.texas.gov/permitting/air/permitbyrule/historical\\_rules/old106list/index106.html](http://www.tceq.texas.gov/permitting/air/permitbyrule/historical_rules/old106list/index106.html)

Outdated Standard Exemption lists may be viewed at the following Web site:

[www.tceq.texas.gov/permitting/air/permitbyrule/historical\\_rules/oldselist/se\\_index.html](http://www.tceq.texas.gov/permitting/air/permitbyrule/historical_rules/oldselist/se_index.html)

The status of air permits and applications and a link to the Air Permits Remote Document Server is located at the following Web site:

[www.tceq.texas.gov/permitting/air/nav/air\\_status\\_permits.html](http://www.tceq.texas.gov/permitting/air/nav/air_status_permits.html)

#### **New Source Review Authorization References**

<b>Title 30 TAC Chapter 116 Permits, Special Permits, and Other Authorizations (Other Than Permits By Rule, PSD Permits, or NA Permits) for the Application Area.</b>	
Authorization No.: 20535	Issuance Date: 07/08/2016
Authorization No.: 36726	Issuance Date: 09/22/2009
Authorization No.: 8647	Issuance Date: 05/20/2015
<b>Permits By Rule (30 TAC Chapter 106) for the Application Area</b>	
Number: 106.183	Version No./Date: 06/18/1997
Number: 106.183	Version No./Date: 09/04/2000
Number: 106.261	Version No./Date: 11/01/2003
Number: 106.262	Version No./Date: 09/04/2000
Number: 106.317	Version No./Date: 09/04/2000
Number: 106.371	Version No./Date: 03/14/1997
Number: 106.371	Version No./Date: 09/04/2000
Number: 106.375	Version No./Date: 08/04/1998
Number: 106.375	Version No./Date: 09/04/2000
Number: 106.412	Version No./Date: 03/14/1997
Number: 106.412	Version No./Date: 09/04/2000
Number: 106.433	Version No./Date: 03/14/1997
Number: 106.472	Version No./Date: 03/14/1997
Number: 106.472	Version No./Date: 09/04/2000
Number: 106.511	Version No./Date: 09/04/2000
Number: 106.512	Version No./Date: 03/14/1997
Number: 106.512	Version No./Date: 09/04/2000

### New Source Review Authorization References

Number: 106.532	Version No./Date: 03/14/1997
Number: 5	Version No./Date: 01/08/1980
Number: 6	Version No./Date: 09/23/1982
Number: 7	Version No./Date: 01/08/1980
Number: 7	Version No./Date: 09/23/1982
Number: 7	Version No./Date: 07/20/1992
Number: 8	Version No./Date: 01/08/1980
Number: 8	Version No./Date: 08/30/1988
Number: 8	Version No./Date: 09/13/1993
Number: 8	Version No./Date: 06/07/1996
Number: 14	Version No./Date: 10/04/1995
Number: 41	Version No./Date: 05/12/1981
Number: 41	Version No./Date: 05/04/1994
Number: 46	Version No./Date: 01/08/1980
Number: 51	Version No./Date: 11/05/1986
Number: 56	Version No./Date: 01/08/1980
Number: 106	Version No./Date: 08/30/1988

### Emission Units and Emission Points

In air permitting terminology, any source capable of generating emissions (for example, an engine or a sandblasting area) is called an Emission Unit. For purposes of Title V, emission units are specifically listed in the operating permit when they have applicable requirements other than New Source Review (NSR), or when they are listed in the permit shield table.

The actual physical location where the emissions enter the atmosphere (for example, an engine stack or a sand-blasting yard) is called an emission point. For New Source Review preconstruction permitting purposes, every emission unit has an associated emission point. Emission limits are listed in an NSR permit, associated with an emission point. This list of emission points and emission limits per pollutant is commonly referred to as the "Maximum Allowable Emission Rate Table", or "MAERT" for short. Specifically, the MAERT lists the Emission Point Number (EPN) that identifies the emission point, followed immediately by the Source Name, identifying the emission unit that is the source of those emissions on this table.

Thus, by reference, an emission unit in a Title V operating permit is linked by reference number to an NSR authorization, and its related emission point.

### Monitoring Sufficiency

Federal and state rules, 40 CFR § 70.6(a)(3)(i)(B) and 30 TAC § 122.142(c) respectively, require that each federal operating permit include additional monitoring for applicable requirements that lack periodic or instrumental monitoring (which may include recordkeeping that serves as monitoring) that yields reliable data from a relevant time period that are representative of the emission unit's compliance with the applicable emission limitation or standard. Furthermore, the federal operating permit must include compliance assurance monitoring (CAM) requirements for emission sources that meet the applicability criteria of 40 CFR Part 64 in accordance with 40 CFR § 70.6(a)(3)(i)(A) and 30 TAC § 122.604(b).



With the exception of any emission units listed in the Periodic Monitoring or CAM Summaries in the FOP, the TCEQ Executive Director has determined that the permit contains sufficient monitoring, testing, recordkeeping, and reporting requirements that assure compliance with the applicable requirements. If applicable, each emission unit that requires additional monitoring in the form of periodic monitoring or CAM is described in further detail under the Rationale for CAM/PM Methods Selected section following this paragraph.

### Compliance Review

1. In accordance with 30 TAC Chapter 60, the compliance history was reviewed on August 31, 2016.  
 Site rating: 0.00 / High Company rating: 0.00 / High  
 (*High < 0.10; Satisfactory ≥ 0.10 and ≤ 55; Unsatisfactory > 55*)
2. Has the permit changed on the basis of the compliance history or site/company rating? .....No

### Site/Permit Area Compliance Status Review

1. Were there any out-of-compliance units listed on Form OP-ACPS? .....No
2. Is a compliance plan and schedule included in the permit? .....No

### Available Unit Attribute Forms

OP-UA1 - Miscellaneous and Generic Unit Attributes  
 OP-UA2 - Stationary Reciprocating Internal Combustion Engine Attributes  
 OP-UA3 - Storage Tank/Vessel Attributes  
 OP-UA4 - Loading/Unloading Operations Attributes  
 OP-UA5 - Process Heater/Furnace Attributes  
 OP-UA6 - Boiler/Steam Generator/Steam Generating Unit Attributes  
 OP-UA7 - Flare Attributes  
 OP-UA8 - Coal Preparation Plant Attributes  
 OP-UA9 - Nonmetallic Mineral Process Plant Attributes  
 OP-UA10 - Gas Sweetening/Sulfur Recovery Unit Attributes  
 OP-UA11 - Stationary Turbine Attributes  
 OP-UA12 - Fugitive Emission Unit Attributes  
 OP-UA13 - Industrial Process Cooling Tower Attributes  
 OP-UA14 - Water Separator Attributes  
 OP-UA15 - Emission Point/Stationary Vent/Distillation Operation/Process Vent Attributes  
 OP-UA16 - Solvent Degreasing Machine Attributes  
 OP-UA17 - Distillation Unit Attributes  
 OP-UA18 - Surface Coating Operations Attributes  
 OP-UA19 - Wastewater Unit Attributes  
 OP-UA20 - Asphalt Operations Attributes  
 OP-UA21 - Grain Elevator Attributes  
 OP-UA22 - Printing Attributes  
 OP-UA24 - Wool Fiberglass Insulation Manufacturing Plant Attributes  
 OP-UA25 - Synthetic Fiber Production Attributes  
 OP-UA26 - Electroplating and Anodizing Unit Attributes  
 OP-UA27 - Nitric Acid Manufacturing Attributes  
 OP-UA28 - Polymer Manufacturing Attributes  
 OP-UA29 - Glass Manufacturing Unit Attributes  
 OP-UA30 - Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mill Attributes  
 OP-UA31 - Lead Smelting Attributes  
 OP-UA32 - Copper and Zinc Smelting/Brass and Bronze Production Attributes  
 OP-UA33 - Metallic Mineral Processing Plant Attributes  
 OP-UA34 - Pharmaceutical Manufacturing  
 OP-UA35 - Incinerator Attributes  
 OP-UA36 - Steel Plant Unit Attributes  
 OP-UA37 - Basic Oxygen Process Furnace Unit Attributes  
 OP-UA38 - Lead-Acid Battery Manufacturing Plant Attributes  
 OP-UA39 - Sterilization Source Attributes

OP-UA40 - Ferroalloy Production Facility Attributes  
OP-UA41 - Dry Cleaning Facility Attributes  
OP-UA42 - Phosphate Fertilizer Manufacturing Attributes  
OP-UA43 - Sulfuric Acid Production Attributes  
OP-UA44 - Municipal Solid Waste Landfill/Waste Disposal Site Attributes  
OP-UA45 - Surface Impoundment Attributes  
OP-UA46 - Epoxy Resins and Non-Nylon Polyamides Production Attributes  
OP-UA47 - Ship Building and Ship Repair Unit Attributes  
OP-UA48 - Air Oxidation Unit Process Attributes  
OP-UA49 - Vacuum-Producing System Attributes  
OP-UA50 - Fluid Catalytic Cracking Unit Catalyst Regenerator/Fuel Gas Combustion Device/Claus Sulfur Recovery Plant Attributes  
OP-UA51 - Dryer/Kiln/Oven Attributes  
OP-UA52 - Closed Vent Systems and Control Devices  
OP-UA53 - Beryllium Processing Attributes  
OP-UA54 - Mercury Chlor-Alkali Cell Attributes  
OP-UA55 - Transfer System Attributes  
OP-UA56 - Vinyl Chloride Process Attributes  
OP-UA57 - Cleaning/Depainting Operation Attributes  
OP-UA58 - Treatment Process Attributes  
OP-UA59 - Coke By-Product Recovery Plant Attributes  
OP-UA60 - Chemical Manufacturing Process Unit Attributes  
OP-UA61 - Pulp, Paper, or Paperboard Producing Process Attributes  
OP-UA62 - Glycol Dehydration Unit Attributes  
OP-UA63 - Vegetable Oil Production Attributes